General

Title

Occupational health: estimated annual incidence rate of work-related amputations involving days away from work per 100,000 full-time equivalents (FTEs).

Source(s)

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

Measure Domain

Primary Measure Domain

Related Population Health Measures: Population Health State

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the estimated annual incidence rate of work-related amputations with days away from work per 100,000 full-time equivalents (FTEs) in the private industry sector.

Rationale

State health agencies, which are vested with the legal authority to require disease reporting and collect health data, play a central role in public health surveillance. Whereas public health surveillance was once focused primarily on infectious diseases, it has expanded in recent years to include surveillance of a wide range of health outcomes and their determinants, including chronic diseases, injuries and health behaviors (Halperin & Horan, 1998). National statistics on occupational injuries and illnesses have been collected largely outside of the public health infrastructure and rely almost entirely on data reported by employers. State health agencies that have access to a wide variety of public health data systems have

an important role in the surveillance of occupational diseases, injuries and hazards.

Work-related amputations are a preventable serious injury, and control of occupational hazards is the most effective means of prevention. Estimating the burden and tracking these injuries can help target prevention programs and activities. Information on reported cases can be used to identify contributory factors and to develop improved or new prevention strategies or regulations to protect workers.

Evidence for Rationale

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

Halperin W, Horan JM. Surveillance of injuries. Public Health Rep. 1998 Sep-Oct;113(5):424-6. PubMed

Primary Health Components

Occupational injuries; amputation

Denominator Description

Estimated total full-time equivalents (FTEs) worked for the same calendar year

Numerator Description

Estimated cases of work-related amputation with days away from work for private sector employees (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

In 2014, approximately 4,900 private sector workers in the United States (U.S.) experienced a nonfatal work-related amputation that required days away from work. Eighty-two percent of these workers were male. About 95% involve amputations to the hand (wrist/hand/finger) (U.S. Bureau of Labor Statistics [BLS], 2015). These injuries can greatly affect a worker's job skills and reduce earnings. Wrist/hand/finger amputation medical and work-lost combined costs averaged $58,424 for emergency department (ED)-treated and released adult cases in 2010, and $289,050 for cases requiring hospitalization (Centers for Disease Control and Prevention [CDC], 2014).

Evidence for Additional Information Supporting Need for the Measure

Centers for Disease Control and Prevention (CDC). Data & statistics (WISQARSâ„¢): cost of injury reports. [internet]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2014 Sep 18.

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

U.S. Bureau of Labor Statistics (BLS). Injuries, illnesses, and fatalities. Survey of Occupational Injuries and Illnesses (SOII): nonfatal cases involving days away from work: selected characteristics (2011 forward). [internet]. Washington (DC): U.S. Bureau of Labor Statistics; 2015.

Extent of Measure Testing

In 1998, the Council of State and Territorial Epidemiologists (CSTE), in association with the National Institute for Occupational Safety and Health (NIOSH), convened the NIOSH-States Occupational Health Surveillance Work Group to make recommendations to NIOSH concerning State-based surveillance activities for the coming decade.

The Work Group recognized the need to pilot test 19 indicators to assess the feasibility of widespread implementation and to develop specific guidance on how to compute the proposed measures. In summer 2002, the five "Core" states with NIOSH Cooperative Agreements to conduct "Core Occupational Health Surveillance" (California, Massachusetts, Michigan, New York, and Washington) agreed to pilot test the indicators and to create user-friendly "how-to" guides so that other states could calculate the indicators.

Subsequent to the initial pilot testing by the five "Core" states, eight additional states (Connecticut, Maine, Nebraska, New Jersey, New Mexico, North Carolina, Oregon and Wisconsin) pilot tested the "how-to" guides. Feedback from these additional states was incorporated into the development of the final "how-to" guides for 19 indicators in November 2004.

Procedures to review, approve, and implement new indicators were developed by the Work Group. In 2013, a fourteenth health effect indicator (*Asthma among Adults Caused or Made Worse by Work*) was developed and pilot tested. The Work Group voted to adopt this as the twenty-first indicator. In 2014, a fifteenth health effect indicator (*Work-Related Severe Traumatic Injury Hospitalizations*) was developed and pilot tested. The Work Group voted to adopt this as the twenty-second indicator.

Evidence for Extent of Measure Testing

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

National Public Health Programs

State/Provincial Public Health Programs

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

State/Provincial

Statement of Acceptable Minimum Sample Size

Does not apply to this measure

Target Population Age

Unspecified

Target Population Gender

Either male or female

National Framework for Public Health Quality

Public Health Aims for Quality

Population-centered

Risk Reducing

Transparency

Vigilant

National Strategy for Quality Improvement in Health Care

National Quality Strategy Priority

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Not within an IOM Care Need

IOM Domain

Not within an IOM Domain

Data Collection for the Measure

Case Finding Period

The calendar year

Denominator Sampling Frame

Geographically defined

Denominator (Index) Event or Characteristic

Geographic Location

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
Estimated total full-time equivalents (FTEs) worked for the same calendar year

Exclusions
Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
Estimated cases of work-related amputation with days away from work for private sector employees

Note: Refer to the "How-To Guide – Indicator #4" section of the original measure documentation for instructions to calculate the estimated annual incidence rate of work-related amputation cases with days away from work per 100,000 full-time equivalents (FTEs).

Exclusions
Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

National public health data

State/Province public health data

Type of Health State

Adverse Health State

Instruments Used and/or Associated with the Measure

U.S. Bureau of Labor Statistics, Annual Survey of Occupational Injuries and Illnesses (SOII)

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Does not apply to this measure (i.e., there is no pre-defined preference for the measure score)

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

Other Available Data: Industry, occupation, age, gender, race/ethnicity, body part, type of event and source of injury. Details are available only for injuries/illnesses involving days away from work.

Recommendations: The U.S. Bureau of Labor Statistics (BLS) Survey of Occupational Injuries and Illnesses (SOII) has many data elements that can be used to better define patterns of work-related

amputations in the state. These may include, for example, industry-specific counts and rates of injuries, and for cases involving days away from work, counts (not rates) by occupation, length of service, age, gender, race/ethnicity and source/nature of injury.

Standard of Comparison

not defined yet

Identifying Information

Original Title

4.2 Estimated annual incidence rate of amputations involving days away from work per 100,000 FTEs.

Measure Collection Name

Occupational Health Indicators

Measure Set Name

Acute and Cumulative Occupational Injuries

Submitter

Council of State and Territorial Epidemiologists - Professional Association

Developer

Centers for Disease Control and Prevention - Federal Government Agency [U.S.]

Council of State and Territorial Epidemiologists - Professional Association

Funding Source(s)

Centers for Disease Control and Prevention (CDC)–National Institute for Occupational Safety and Health (NIOSH) Award 2-R01 OH010094-05: Enhancing State-Based Occupational Health Surveillance Capacity

Composition of the Group that Developed the Measure

Original Work Group Members: National Institute for Occupational Safety and Health (NIOSH)–Council of State and Territorial Epidemiologists (CSTE) Occupational Health Surveillance Work Group

Wayne Ball, Utah Department of Health
Geoffrey Calvert, NIOSH
Robert Castellan, NIOSH
Letitia Davis, Massachusetts Department of Health
Robert Harrison, California Department of Health Services
Michael Heumann, Oregon Department of Health Services
Kim Lim, Maine Department of Labor

John Myers, NIOSH
Matt London, New York State Department of Health
Latoya Osmani, CSTE
David Parker, Minnesota Department of Health
Kenneth Rosenman, Michigan State University
Robert Roscoe, NIOSH
Diana Salzman, Texas Department of Health
John Sestito, NIOSH
Catherine Thomsen, Oregon Department of Human Services
David Valiante, New Jersey Department of Health and Senior Services

Core State Members of the Occupational Health Surveillance Pilot Project

Barbara Materna, California Department of Health Services
Florence Reinisch, California Department of Health Services
Tsegaye Bekle, Massachusetts Department of Public Health
Letitia Davis, Massachusetts Department of Public Health
Rokho Kim, Massachusetts Department of Public Health
Thomas Largo, Michigan Department of Community Health
Martha Stanbury, Michigan Department of Community Health
Alicia Fletcher, New York State Department of Health
Kitty Gelberg, New York State Department of Health
Dave Bonauto, Washington State Department of Labor and Industries
Christy Curwick, Washington State Department of Labor and Industries

Current Occupational Health Indicator (OHI) and Work Group Leads

Marija Borjan, *Co-chair* (State Representative from New Jersey)
Tristan Victoroff, *Co-chair* (NIOSH Representative)
Patricia Schleiff, *Co-chair* (NIOSH Representative)
Amy Patel, *Secretary* (CSTE)
Kathy Leinenkugel, *OHI Lead* (State Representative from Iowa)

Financial Disclosures/Other Potential Conflicts of Interest

None

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2016 Mar

Measure Maintenance

Annually

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates a previous version: Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists; 2014 Mar. 116 p.

Measure Availability

Source available from the Council of State and Territorial Epidemiologists (CSTE) Web site .

For more information, contact CSTE at 2872 Woodcock Boulevard, Suite 250, Atlanta, GA 30341; Phone: 770-458-3811; Fax: 770-458-8516; Web site: https://cste.site-ym.com/ .

NQMC Status

This NQMC summary was completed by ECRI Institute on December 1, 2014. This NQMC summary was verified by the measure developer on January 23, 2015.

This NQMC summary was updated by ECRI Institute on September 17, 2015. This NQMC summary was verified by the measure developer on October 19, 2015.

Copyright Statement

Production

Source(s)

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

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